

REMARKS

Applicants appreciate the Examiner's thorough review of the present application, and respectfully request reconsideration in light of the preceding amendments and the following remarks.

Claims 1, 3, 4, 7, 9, 10 and 13-24 are currently pending in this case. Several previously presented claims have been amended to better define the claimed invention. New claims 17-24 have been added to provide Applicants with the scope of protection to which they are believed entitled. The amended/new claims find solid support in the original specification and drawings, e.g., at paragraphs 47, 48 and 65. No new matter has been introduced through the foregoing amendments.

The new 35 U.S.C. 103(a) rejections relying on Applicant's Admitted Prior Art (*APA*) and *Lee* (U.S. Patent No. 5,923,759) are noted. In particular, the Examiner alleged that *APA* discloses all substantive steps of the claimed process, except for an application layer that supports a plurality of applications and protocols. The Examiner further relied on the *Lee* CAPI (Fig. 4, column 8 lines 22-34) for the missing element, and concluded that the claimed invention would have been obvious over *APA* in view of *Lee*.

Applicants respectfully disagree with the Examiner's position, because *Lee*, contrary to the Examiner's allegation, does not teach or suggest the claimed smart-card that supports a plurality of applications and protocols.

Lee (US Patent No. 5,923,759, System for Securely Exchanging Data with Smart Card, cited invention) discloses a card-enabled processing system having a security module communicating a plurality of smart cards and encoded data. See Abstract of *Lee*.

As shown in Fig. 1 of *Lee*, a programmable printed circuit board 100 mounted in a slot of a host computer functions as a leader. Three smart card units 142, 144, 146 are connected to this board and the board is thus able to communicate with several smart cards, each smart card has a single application and does not use a layered architecture. In contrast, according to embodiments of the present invention, a mobile terminal acting as a leader and a smart use the same or similar form of layered architecture and an optimal communication environment can be set between the mobile terminal and the smart card.

As shown in Fig. 4 of Lee, operations of the processor in the programmable printed circuit board are divided in several layers. It is decided whether each layer (application layer, card layer, ISO layer) is passed according to requests of an application program. Accordingly, in the host computer, according to each smart card application, all the application layer, card layer, ISO layer can be passed, or two of these layers can be passed, or only one layer can be passed. These layered divisions are only functions of the processor in the programmable printed circuit board, and there is no such configuration and function in the smart cards. In contrast, a smart card in embodiments of the present invention is operable when it is inserted into a mobile terminal. Application information, supportable communication speed information, supportable communication protocol information in the smart card are sent with an answer-to-reset signal, the order and response in which the smart card is sending/receiving information are passed via both application layer and transmission layer.

It should be now clear that *Lee* does not teach or suggest that the smart card supports multiple applications and protocols. The *Lee* CAPI is executed by processor 156 (column 8 line 23) which is a component of the card-enabled system or card-reader 100 (Fig. 1). Thus, the CAPI teaching of *Lee* corresponds, at best, to a card-reader that supports multiple applications and protocols. *Lee* does not teach or suggest a smart card that has a layered architecture and supports multiple applications and protocols as presently claimed. For this reason alone, the Examiner's new rejection is clearly erroneous and should be withdrawn.

As to claims 3 and 9, the applied references, especially *APA*, do not fairly teach or suggest the limitation of sending a command for requesting to select the protocol and parameters to the smart card only if the mobile terminal executes the process of the protocol and parameters selection, otherwise sending a command for requesting to open a logical channel, which is to be used in the application, to the smart card. The added feature finds support in at least Fig. 3 at S304 and the corresponding text. In *APA*, a command for requesting to select the protocol and parameters is always sent as best seen in Fig. 1, at S103. *Fu* does not appear to teach or suggest the newly claimed feature, either.

As to claims 10, 13, 14, the applied references, especially *Lee*, do not fairly teach or suggest the claimed smart-card having independently embodied transmission layer and application layer. As discussed above, *Lee* does not teaches a smart-card that has a transmission layer and

an application layer. The reference discloses only a card-reader that appears to have a layered architecture. Thus, it cannot be said that *Lee* teaches a smart-card having independently embodied transmission layer and application layer as presently claimed.

As to claims 17, 19, 21, 23, the applied references, especially *APA*, do not fairly teach or suggest the steps of changing the application used at present to another application selected from the plurality of applications supported by the smart card; and establishing another communication environment suitable for said another application and secure another communication channel between the smart card and the mobile terminal based on said another communication environment. The new claims find support in at least paragraphs 47-48 of the application as filed. In *APA*, since the smart card does not support multiple applications or protocols, the reference fails to teach or suggest the claimed application and communication environment changing steps.

As to claims 18, 20, 22, 24, the applied references, especially *APA*, do not fairly teach or suggest that the optimum communication environment is dynamically established for the application to be used at present. In other words, the optimum communication environment is established to accommodate the application to be used at present. When the application is changed, the optimum communication environment is dynamically re-established to accommodate the new application. *APA* teaches a different arrangement, in which the communication channel is established once for the entire session without allowing the applications or communication environment to be dynamically changed.

Conclusion

Therefore, all objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,
LOWE HAUPTMAN & BERNER, LLP
/Yoon S Ham/
Yoon S. Ham
Registration No. 45,307

Customer Number: 22429
1700 Diagonal Road, Suite 300
Alexandria, Virginia 22314
(703) 684-1111
(703) 518-5499 Facsimile
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